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EXAMINER

JOHNSTONE, ADRIENNE C

ART UNIT	PAPER NUMBER
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1733

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/812,293
Filing Date: March 20, 2001
Appellant(s): ABDALLAH, DAVID G.

Cynthia S. Murphy (Renner, Otto, Boisselle & Sklar, LLP)
For Appellant

EXAMINER'S ANSWER

MAILED
JUL 29 2004
GROUP 1700

This is in response to the appeal brief filed May 6, 2004.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

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(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 2-10 and 21-23 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

A substantially correct copy of appealed claims 2-10 and 21-23 appears in Appendix A of the appellant's brief (pages 11-12 of the brief). The minor errors are as follows: in claim 8 line 1, "comprises" was changed to -- has -- in Amendment B filed January 22, 2003 (after final amendment entered with Request for Continued Examination filed February 25, 2004).

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(9) Prior Art of Record

5-294104	NAGUMO (Japan)	11-1993
4,274,821	KIEMER	6-1981
4,300,878	IBLE	11-1981
4,657,718	SICKA ET AL	4-1987
5,292,472	TOMPKINS	3-1994

Brief Summary of the Prior Art

Japanese Patent Application 5-294104 discloses a tire having substantially the same features as those of the claimed tire, wherein there is a reasonable basis for inferring that the rubberized carcass layer (body ply) having two cord rows and obtained by the manufacturing embodiment of Figure 5 in the reference is structurally indistinguishable from the claimed elastomeric multiple cord row body ply obtained by extrusion, and therefore burden has been shifted to appellant to show lack of inherency (see for example the case law cited in MPEP 2112 and 2112.01).

The remaining prior art references are cited as examples of the notoriously well known extrusion technique for manufacturing cord reinforced plies for tires: Kiemer and Ible disclose examples of the prior art extruded tire cord ply structure similar to the claimed structure but wherein a single row of cords is drawn through the extruder rather than the claimed plurality of cord rows; Sicka et al. and Tompkins disclose examples of the prior art extruded tire cord ply structure similar to the claimed structure but wherein the ply having a plurality of cord rows is extruded as a tube and therefore would not have the claimed edges forming an axially extending seam in the tire.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-10 and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Application 5-294104.

See paragraphs 0005-0021 of the translation: radial-ply tire in Figure 1, which is "green" (uncured) before molding and vulcanizing (curing) of the tire, including carcass layer 2 (body ply) comprising two rows of organic fiber cords 5a, 5b embedded in coating rubber 6 as shown in Figure 2 (elastomeric sheet with a plurality of rows of reinforcement cords embedded therein) and manufactured according to the embodiment of Figure 5 wherein coating rubber 6 is calendered on the outer side of each cord row 5a and 5b to form rubber layers 2a and 2b and then the cord rows are immediately brought together on their inner sides through rolls 11 to form carcass layer 2 (the rubber material still hot from the calender flows around the cords of both rows when pulled through the rolls 11, so there is a reasonable basis for inferring that the carcass layer 2 of this embodiment is structurally indistinguishable from the claimed body ply formed "by extruding an elastomeric material between and around the cords in the plurality of rows"; burden therefore shifts to appellant to show lack of inherency (see for example the case law cited in MPEP 2112 and 2112.01)); as shown in Figure 2, carcass layer 2 includes splice section S joining edges 2e along a length L in the tire circumferential direction (edges forming an axially extending seam); the exemplary organic fiber cords all have the same 1000D/2 polyester cord construction (same diameter d) and the exemplary spacing between each of the cords 5a equal to 55 cords per 50 mm width of the carcass layer is the same as the exemplary spacing between each of the cords 5b ($d_{a-a}=d_{b-b}$). As to claim 23, the organic fiber cords 5a, 5b are radially oriented at substantially 90 degrees to the tire circumferential direction (substantially parallel to the tire rotation axis, translation paragraph 0009). As to claims 8-10, in the exemplary 1000D/2 polyester cord each strand of 1000 Denier has a cross-sectional area $A = D/p = (\pi d^2/4) = 0.082 \text{ mm}^2$, so the diameter d of each strand is about 0.32 mm which results in a cord diameter of about $2 \times 0.32 \text{ mm} = 0.64 \text{ mm}$; the exemplary cord end count of 55 cords per 50 mm gives for each row an end count of 27.5 cords per 50 mm (0.55/mm) for a cord spacing in each row of $1/0.55 = 1.8 \text{ mm}$; in the

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exemplary tire size of 185/60R14 the circumference of the flat carcass ply before expanding into the finished tire is about the same as circumference of the rim (14 inches = 356 mm), so the cord spacing in each row of 1.8 mm around a 356 mm circumference results in $356 \text{ mm} / 1.8 \text{ mm} = 198$ cords per row, well within the broadly claimed range of about 50 to about 600 cords per row. As to claim 7, the close structural correspondence (radial passenger tire with cord diameter, row spacing, and number of cords per row in the claimed ranges) between the carcass ply in the JP '104 tire and the claimed tire provide a reasonable basis for inferring that the JP '104 carcass ply would also meet the claimed broad carcass ply width of about 150 mm to about 250 mm, therefore burden shifts to appellant to show lack of inherency (see the case law in MPEP 2112 and 2112.01). As to claim 6, the carcass layer has a thickness of preferably 0.45-0.85 mm (translation paragraph 0016). As to claim 2, the organic fiber cords 5a, 5b are transversely staggered as shown in Figure 2 (translation paragraph 0010).

Appellant continues to argue that the method limitation of forming the body ply by extrusion requires a structural difference in the tire claims, however as noted above in the manufacturing embodiment of Figure 5 in JP '104 the rubber material still hot from the calender would flow around the cords of both layers, thus providing a reasonable basis for inferring that the carcass layer of this embodiment would be structurally indistinguishable from the claimed extruded body ply; burden is therefore shifted to appellant to show lack of inherency (see the case law in MPEP 2112 and 2112.01), and therefore appellant's arguments without supporting evidence or reasoning are not persuasive (MPEP 2145(I)).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-10 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application 5-294104 in view of Kiemer (4,274,821), Ible (4,300,878), Sicka et al. (4,657,718), and Tompkins (5,292,472).

JP '104 is discussed above. Extrusion is a notoriously well known technique for manufacturing cord reinforced plies for tires, as evidenced by Kiemer and Ible for example, and Sicka et al. and Tompkins disclose examples of the conventional technique of extruding a tubular tire cord ply having a plurality of cord rows; it would therefore have been obvious to one of ordinary skill in the art to use such a notoriously well known alternative technique to manufacture the carcass layer in the above tire.

In response to appellant's argument that bodily incorporation of the prior art multi-cord row tubular extrusion process and/or the prior art straight single-cord row extrusion process into the JP '104 manufacturing embodiment of Figure 5 would not yield the straight multi-cord row extruded body ply required by the claims, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Specifically, contrary to appellant's arguments the combined teachings of the references show that one of ordinary skill in the art would have had a reasonable expectation of success in using the notoriously well known alternative extrusion technique to manufacture the carcass layer in the JP '104 tire.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application 5-294104.

KP '104 is discussed above: it would have been obvious to one of ordinary skill in the art to provide such conventional carcass cord count per row in the above tire. It should be noted that applicant did not challenge the examiner's position in the Office action mailed November 20, 2002 that conventional carcass cord counts per row in such passenger radial tires would fall within the claimed range, therefore this is taken as admitted prior art as per MPEP 2144.03.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application 5-294104.

JP '104 is discussed above: it would have been obvious to one of ordinary skill in the art to provide such conventional radial passenger tire carcass ply width in the above tire. It should be noted that applicant has not asserted any novelty for this feature in the original disclosure and that applicant did not challenge the examiner's position in the Office action mailed November 20, 2002 that conventional carcass cord counts per row in such passenger radial tires would fall within the claimed range, therefore this is taken as admitted prior art as per MPEP 2144.03.

(11) Response to Argument

As noted above with respect to the anticipation rejection, appellant continues to argue that the method limitation of forming the body ply by extrusion requires a structural difference in the tire claims; however, as noted above in the manufacturing embodiment of Figure 5 in JP '104, the rubber material still hot from the calender would flow around the cords of both layers, thus providing a reasonable basis for inferring that the carcass layer of this embodiment would be structurally indistinguishable from the claimed extruded body ply; burden is therefore shifted to appellant to show lack of inherency (see the case law in MPEP 2112 and 2112.01), and therefore appellant's arguments without supporting evidence or reasoning are not persuasive (MPEP 2145(I)).

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As noted above with respect to the obviousness rejection, in response to appellant's argument that bodily incorporation of the prior art multi-cord row tubular extrusion process and/or the prior art straight single-cord row extrusion process into the JP '104 manufacturing embodiment of Figure 5 would not yield the straight multi-cord row extruded body ply required by the claims, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Specifically, contrary to appellant's arguments the combined teachings of the references show that one of ordinary skill in the art would have had a reasonable expectation of success in using the notoriously well known alternative extrusion technique to manufacture the carcass layer in the JP '104 tire.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Art Unit 1733



Adrienne Johnstone
July 21, 2004

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